No. 200400126

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Cascade International Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

FESCUE, TALL

'Hoedown'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this seventh day of February, in the year two thousand and eight.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Cascade International Seed Company

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
CAS-MA86, MA86

3. VARIETY NAME
HOEDOWN

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
8483 W. STAYTON RD.
AUMSVILLE, OR 97325

5. TELEPHONE *(include area code)*
(503) 749-1822

6. FAX *(include area code)*
(503) 749-1824

FOR OFFICIAL USE ONLY

PVPO NUMBER
#200400126

FILING DATE
2/23/2004

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
OR

9. DATE OF INCORPORATION
1986

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
CHAD F. MIEBACH
RADIX RESEARCH, INC.
533 PARK AVE.
EUGENE, OR 97404

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 3,652.00
DATE 2/23/2004

CERTIFICATION FEE:
$ 768.00
DATE 1/5/2008

11. TELEPHONE (Include area code)
(503) 307-1442

12. FAX (Include area code)
(541) 461-0766

13. E-MAIL
radixcfm@lycos.com

14. CROP KIND *(Common Name)*
Tall fescue

16. FAMILY NAME *(Botanical)*
Gramineae

15. GENUS AND SPECIES NAME OF CROP
Festuca arundinacea

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? *(OPTIONAL)*
☐ YES ☒ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED
(Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Exhibit F. Declaration Regarding Deposit
g. ☒ Voucher Sample *(3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☒ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 21 and 22 below)* ☒ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☒ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☒ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☒ YES ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
Greg Hagen Cascade Seed Co.			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Greg Hagen			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
GENERAL MANAGER	10-17-2007		

(See reverse for instructions and information collection burden statement)

GENERAL INSTRUCTIONS: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for $4,382 ($518 filing fee and $3,864 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice).* **NEW:** With the application for a seed reproduced variety **or by direct deposit soon after filing**, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of $768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

Plant Variety Protection Office
Telephone: (301) 504-5518 **FAX:** (301) 504-5291
General E-mail: PVPOmail@usda.gov
Homepage: http://www.ams.usda.gov/science/pvpo/PVPindex.htm

#200400126

SPECIFIC INSTRUCTIONS:
To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. http://www.ams.usda.gov/lsg/seed.htm.

ITEM

19a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

20. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

23. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

24. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

22. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

23. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

First date of sale in the U.S. – March 12, 2003

24. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

Amended Exhibit A - pg.1

Hoedown (MA86) Tall Fescue (Festuca arundinacea)

Origin and Breeding History

1) **Genealogy**: **'Hoedown'** originates from a special population improvement program (SA) to expand seasonal activity and forage production of Tall fescue at Cascade International Seed Company's Research location in Aumsville, Oregon. **'Hoedown'** is constructed of an eight parent clone polycross, incorporating selections from five maternal lines from advanced nursery 'SA'. Two of these five maternal lines were closely related, tracing back to siblings of one elite selection from the variety, 'Martin'; two maternal lines entered the general population as collections from Indiana and Wisconsin by Chad Miebach; and one line from the variety 'Teton'. **'Hoedown'** is an advanced generation, synthetic cultivar resulting from four generations of line and recombinant open-pollinated (OP) improvement, one generation of backcrossing to selected maternal clones, and two generations of recurrent phenotypic selection.

Initial Selection: In 1995, 'SA' a forage Tall fescue parent nursery with 21selected clones was isolated from the 'general improvement population'. The 'general improvement population' was comprised of elite selections from OP1 through OP3 progeny lines originating as plant introduction lines from the Germplasm Repository system, commercially available varieties, and personal world collections. The intention of this new nursery, 'SA', was to create and evaluate progeny from open-pollinated hybridizations, focusing on increasing grazing performance, expanding seasonal activity, and increasing overall forage production without losing significant cold tolerance.

2) **Breeding Method and Subsequent Selection**: In 1997, eight plants from five OP1 lines in 'SA' were selected and cross-pollinated in isolated. Syn 1 seed was harvested separate by maternal lineage, and subsequently planted in an isolated crossing block and were subject to recurrent phenotypic selection pressure for: uniform maturity and growth habit, expanded seasonal forage production without losing cold tolerance, low crown for improved grazing potential, and disease resistance. During the Syn 1 cycle, three selected Syn 0 maternal clones were replicated in alternating lines between Syn 1 lines and allowed to transfer pollen to increase uniformity and habit. Syn 2 maternal seed lines were bulked together with even representation by weight.

Multiplication: A portion of the Syn 2 bulked population seed was used to establish a five-acre, thinly seeded and isolated increase field in the fall of 1998. This Syn 2 increase was subject to one more generation of recurrent phenotypic selection pressure to produce Syn 3 Breeder seed in 1999 and 2000. All off-types and obvious variants were removed from the population during the seed increase generation. Seed collected from this breeder increase was used to establish an Experimental Variety status commercial production seed field during the spring of 2000 in Oregon.

Amended Exhibit A - pg.2

3) **Evidence of Uniformity and Stability**: **'Hoedown'** has been observed to be uniform and stable through three successive generations of varietal finishing and multiplication for characteristics described within this application. There is one notable variant common in approximately 4% of the population with the following differences (compared to the general population): 100% 'Total Plant Height', 110% 'Height at Ear Emergence', 130% 'Tiller Leaf Width', 130% Tiller Leaf Length, and 120% 'Panicle Length'. This variant has been observed to be uniform, stable and predictable at the frequencies indicated during the three generations of varietal finishing and multiplication. The breeder increase field and a portion of the Experimental Certified Seed field were both rouged to maintain integrity of plant type and to enhance uniformity of subsequent generations.

All evaluation, breeding and most subsequent selection and finish work was undertaken at Cascade International Seed Company's research station in Aumsville, Oregon, USA and concluded during 1999. All breeding work was carried out by: Chad F. Miebach, Breeder and now co-owner of Radix Research, Inc.

Amended **Exhibit B**

Hoedown (MA86) Tall Fescue (Festuca arundinacea)

Novelty statement

'Hoedown', was bred and selected on the basis of strong establishment, uniform maturity and phenotype, seasonal growth habit and activity, improved forage production and seed production, lower crown for improved grazing tolerance, strong tolerance to drought stress, and resistance to stem rust (Puccinia graminis).

'Hoedown' Tall fescue is a unique cultivar bred and developed from an eight parent clone polycross, incorporating five maternal lines from advanced nursery 'SA'. Two of these five maternal lines were closely related, tracing back to siblings of one elite maternal selection from the variety, 'Martin'; two maternal lines entered the general population as collections from Indiana and Wisconsin; and one line from the variety 'Teton'. **'Hoedown'** most closely resembles the variety **'Martin'** in its phenotypic expression.

The **'Hoedown'** morphological comparison to **'Martin'** is as follows:

'Total Plant Height' average is 9.1 cm shorter than Martin (pg.10)

* Significant difference at 5% LSD

'Height at Ear Emergence' is similar (pg.11)

'Tiller Leaf Width' average is 0.52 mm narrower (pg.12)

'Tiller Leaf Length' average is 3.1 cm shorter (pg.13)

* Significant difference at 5% LSD

'Internode Length' average is 0.8 cm shorter (pg.14)

'Panicle Length' average is 2.6 cm shorter (pg.15)

'Rhizome Length' is similar (pg.16)

Maturity is approximately 1 day later to anthesis

'Panicle Type' is closed, compared to open for 'Martin'

'Awns' are present, compared to absent for 'Martin'

'Glume Color' is Yellowish-green, compared to purplish for 'Martin'

EXHIBIT C
(TALL & MEADOW FESCUES)

U.S. DEPARTMENT OF AGRICULTURE
PLANT VARIETY PROTECTION OFFICE, AMS, USDA
NATIONAL AGRICULTURAL LIBRARY Bldg., Rm. 500
10301 BALTIMORE Blvd.
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY
TALL & MEADOW FESCUES
(*Festuca* spp.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Cascade International Seed Company	CAS-MA86, MA86	Hoedown

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)
8483 W. Stayton Rd.
Aumsville, OR 97325

FOR OFFICIAL USE ONLY
PVPO NUMBER
200400126

Place the appropriate number that describes the varietal characteristic of this variety in the boxes below. Use leading zeroes when necessary (e.g. 089). Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors. Characteristics marked with an asterisk * are characteristics which should be recorded.

* 1. *SPECIES:* (With comparison varieties, use varieties within the species of the application variety)

21 1 = *F. arundinacea* (Tall)

Turf Types

1 = Kentucky 31 2 = Rebel 3 = Olympic 4 = Bonanza 5 = Arid 6 = Rebel II
7 = Shortstop 8 = Silverado 9 = Rebel Jr. 10 = Mini Mustang 11 = Crewcut 12 = Bonsai

Forage Types

20 = Kentucky 31 21 = Martin 22 = Forager 23 = Mozark
24 = Kenhy 25 = AU Triumph 26 = Fawn 27 = Cajun

____ 2 = *F. pratensis* (Meadow)

30 = Admira 31 = Beaumont 32 = Comtessa 33 = Ensign 34 = Trader

* 2. CYTOLOGY:

2n=6x=42 Chromosome Number

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

2 Transition Zone 2 West 2 Northeast ____ Other (Specify):_____

* 4. MATURITY: (Date First Headed, 10% of Panicle Emergence)

4 Maturity Class 1 = Very early ( ) 2 = AU Triumph 3 = Early (Fawn) 4 = K31, Kenhy 5 = Medium (Rebel)
6 = Bonanza 7 = Late (Silverado) 8 = 9 = Very late

Date Headed May 9 Location Aumsville, Oregon

____ Days earlier than ____

Maturity same as ____ Comparison Variety

1 Days later than 21

*** 5. MATURE PLANT HEIGHT CM: (Average of 100 culms from crown to top of panicle, if panicle is nodding, straighten)**

__152.3__ cm Height

__10.7__ cm shorter than __21__

Height same as ___ Comparison Variety

___.___ cm taller than ___

*** INTERNODE LENGTH CM: (First internode subtending the flag leaf)**

__30.9__ cm Internode length

__1.4__ cm shorter than __21__

Length same as ___ Comparison variety

___.___ cm longer than ___

*** HEIGHT AT EAR EMERGENCE CM: (Flag leaf height from crown to flag leaf node)**

__60.9__ cm Height

__2.0__ cm shorter than __21__

Height same as ___ Comparison Variety

___.___ cm taller than ___

*** 6. GROWTH HABIT: (Mature Plants)**

__9__ 1 = Prostrate ( ) 3 = Semiprostrate ( ) 5 = Horizontal ( )
7 = Semierect (Rebel) 9 = Erect (Mini Mustang)

*** 7. RHIZOMES (Psuedo):**

__31.9__ mm Length ___1 = Absent ( ) 2 = Rare (Rebel) 3 = Common ( )

*** 8. LEAF BLADE: (Tiller leaves/ turf color)**

*__7__ Color: 1 = Light green ( ) 3 = Medium light green ( ) 5 = Green ( )
7 = Medium dark green ( ) 9 = Very dark green ( )
__7__ Specify rating of comparison variety

*__1__ Anthocyanin: 1 = Absent ( ) 9 = Present ( )

*__1__ Basal Hairs: 1 = Absent ( ) 9 = Present ( )

*__1__ Margins: 1 = Smooth ( ) 5 = Semi-rough ( ) 9 = Rough ( )

*__3__ Width Class: 1 = Very coarse ( ) 3 = Coarse ( ) 5 = Medium ( )
7 = Fine ( ) 9 = Very Fine ( )

*** TILLER LEAF LENGTH CM: (First leaf subtending the flag leaf)**

__27.0__ cm Tiller Leaf Length

__2.8__ cm shorter than __21__

Length same as ___ Comparison Variety

___.___ cm longer than ___

*** TILLER LEAF WIDTH MM:**

__8.2__ mm Tiller Leaf Width

__0.5__ mm narrower than __21__

Width same as ___ Comparison variety

___.___ mm wider than ___

8. LEAF BLADE: (continued)

FLAG LEAF LENGTH CM:

___.__ cm Flag Leaf Length

__.__ cm shorter than ___

Length same as ___ Comparison Variety

__.__ cm longer than ___

FLAG LEAF WIDTH MM:

__.__ mm Flag Leaf Width

__.__ mm narrower than ___

Width same as ___ Comparison variety

__.__ mm wider than ___

* 9. LEAF SHEATH: (Basal Portion)

(BT: 7/17/06) * 1 Anthocyanin (seedling): 1 = Absent (K31) 9 = Present ( )

* 7 Auricle Hairiness: 1 = Absent ( ) 9 = Present ( )

* 10. PANICLE: (At seed maturity except where noted.)

* 1 Shape: 1 = Narrow-tapering ( ) 5 = Ovate ( ) 7 = Oblong ( ) 9 = Other (specify)

* 1 Type: 1 = Compact (appressed) 5 = Intermediate ( ) 7 = Open ( ) 9 = Other (specify)

* 8 Orientation: 1 = Nodding ( ) 9 = Erect ( )

* 9 Branch Pubescence: 1 = Glabrous ( ) 9 = Pubescent ( )

* 1 Anther Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green 4 = Purplish 5 = Reddish 6= Other (Specify)

* 1 Glume Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green 4 = Purplish 5 = Reddish 6= Other (Specify)

* 28.3 cm Panicle Length (from base to tip, if nodding, straighten; after anthesis)

3.2 cm shorter than 21

Length same as ___ Comparison Variety

__.__ cm longer than ___

* 11. SEED: (With Lemma & Palea)

* 2,650 mg per 1000 seeds

450 mg less than 21

Weight same as ___ Comparison Variety

____ mg more than ___

PALEA: (Keels or Margins) ___ Hairs: 1 = Absent ( ) 5 = Short (Missouri 96) 9 = Long ( )

LEMMA: ___ Hairs: 1 = Absent (Kenhy) 5 = Several ( ) 9 = Many (Missouri 96)

__.__ mm Lemma Length (Mature)

__.__ mm Lemma width

__.__ mm shorter than ___

__.__ mm narrower than ___

Length same as ___ Comparison Variety

Width same as ___ Comparison variety

10. PANICLE: (continued)

*AWNS: 9 AWNS: 1 = Absent ( ) 9 = Present (Falcon) 92 % Plants with awns

200400126

__.__ mm Awn length (Of those present.)

__.__ mm Shorter than ___

Length same as ___ Comparison Variety

__.__ mm Longer than ___

12. DISEASE, INSECT, AND NEMATODE REACTION: (0= Not Tested 1= Least Resistant 9= Most Resistant)

0 Melting-out *Drechslera poae*

0 Leaf Spot *D. siccans*

0 Net Blotch *D. dictyoides*

5 Brown Patch *Rhizoctonia solani*

0 C. Leaf Spot *Cercospora fectucae*

0 Pink Snow Mold *Gerlachia nivalis*

0 Silver Top *F. tricinctum, F. roseum*

___ Other Disease _____

___ Other Insect _____

___ Other Nematode _____

0 Blind Seed *Gloeotinia temulenta*

0 Dollar Spot *Lanzia, Mollerdiscus* spp.

7 Stem Rust *Puccinia graminis*

0 T. Blight *Typhula incarnata*

0 Pythium Blight *Pythium* spp.

6 Powdery Mildew *Erysiphe graminis*

6 Crown Rust *Puccinia coronata*

13. ENVIRONMENTAL STRESS

8 Drought Stress 1 = Susceptible ( ) 5 = Tolerant ( ) 9 = Resistant ( )

6 Shade Stress 1 = Susceptible ( ) 5 = Tolerant ( ) 9 = Resistant ( )

8 Winter Stress 1 = Susceptible ( ) 5 = Tolerant ( ) 9 = Resistant ( )

14. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics, indicate the degree of resemblance with the following scale:

1 = Application variety is less than comparison variety 2 = Same as 3 = More than, better, greater, darker, etc.

Character	Varieties	Rating	Character	Varieties	Rating
Leaf Width	KY31-0E	2	Leaf Color	Martin	3
Panicle Color	"	1	Panicle Shape	KY31-0	2
Seed Size	"	2	Cold Injury	Martin	3
Winter Color	Martin	3	Heat	Martin	3
Disease					

* 15. EXPERIMENTAL: Give a brief summary of the experimental design utilized to collect the data used on this form. Cultural condition number of plants measured and plant spacing must be specified.

Please see page 9

Objective Description #15 – Experimental

Hoedown (MA86) Tall Fescue (Festuca arundinacea)

Site Information: Radix Research, Inc. - North Farm in Aumsville, Oregon. This site is located 9 miles east of Salem on Clackamas gravelly loam.

Design: Randomized spaced-plant blocks with 3 replications of 35 plants each on 3 foot spacing.

Maintenance: No irrigation. Two spring applications of 45 lbs. Nitrogen (40-0-~~0~~-6) and (46-0-0) each, and one fall application of 35 lbs. Nitrogen (16-16-16). (ES: 9/17/2006 per applicant's authorization)

Data Analysis: 'Statistix for Windows' analytical software program

STATISTIX FOR WINDOWS

Table 1:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE TPH: TOTAL PLANT HEIGHT - 2002 DATA (MM)

LSD (T) COMPARISON OF MEANS OF TPH BY ID

ID	MEAN TPH	HOMOGENEOUS GROUPS
Martin	1564.6	A
Stag (EA28)	1514.0	A B
Fawn	1501.8	.. B
KY31-0E	1499.2	.. B
Hoedown (MA86)	**1489.6**	**.. B**
Cajun	1485.2	.. B
Stargrazer	1464.1	.. B C
AU Triumph	1412.6	 C

THERE ARE 3 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	53.871
STANDARD ERROR FOR COMPARISON	27.342
REJECTION LEVEL (ALPHA)	0.050

Table 2:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE TPH2: TOTAL PLANT HEIGHT - 2003 DATA (MM)

LSD (T) COMPARISON OF MEANS OF TPH2 BY ID

ID	MEAN TPH2	HOMOGENEOUS GROUPS
Martin	1630.2	A
Fawn	1575.2	.. B
Stag (EA28)	1574.0	.. B
KY31-0E	1548.6	.. B C
Hoedown (MA86)	**1523.0**	**... . C**
Stargrazer	1516.3	... . C D
Cajun	1516.2	... . C D
AU Triumph	1478.0	... . .. D

THERE ARE 4 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	42.049
STANDARD ERROR FOR COMPARISON	21.342
REJECTION LEVEL (ALPHA)	0.050

STATISTIX FOR WINDOWS

Table 1:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE HEE: HEIGHT AT EAR EMERGENCE - 2002 DATA (MM)

LSD (T) COMPARISON OF MEANS OF HEE BY ID

ID	MEAN HEE	HOMOGENEOUS GROUPS
Hoedown (MA86)	**600.6**	**A**
Stag (EA28)	569.2	A B
Martin	567.7	A B
KY31-0E	547.4	.. B C
Cajun	545.5	.. B C
Fawn	542.7	.. B C
Stargrazer	509.2	... . C D
AU Triumph	491.9	... .. . D

THERE ARE 4 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	45.720
STANDARD ERROR FOR COMPARISON	23.205
REJECTION LEVEL (ALPHA)	0.050

Table 2:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE HEE2: HEIGHT AT EAR EMERGENCE - 2003 DATA (MM)

LSD (T) COMPARISON OF MEANS OF HEE2 BY ID

ID	MEAN HEE2	HOMOGENEOUS GROUPS
Martin	628.4	A
Hoedown (MA86)	**608.5**	**A B**
Stag (EA28)	599.1	A B
KY31-0E	572.1	.. B C
Stargrazer	569.0	.. B C
Cajun	567.9	.. B C
Fawn	531.3	... . C D
AU Triumph	521.7	... . .. D

THERE ARE 4 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	45.426
STANDARD ERROR FOR COMPARISON	23.056
REJECTION LEVEL (ALPHA)	0.050

Table 1:

STATISTIX FOR WINDOWS

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE TLW: TILLER LEAF WIDTH - 2002 DATA (MM)

LSD (T) COMPARISON OF MEANS OF TLW BY ID

ID	MEAN TLW	HOMOGENEOUS GROUPS
Stargrazer	8.73	A
Martin	8.20	A B
Stag (EA28)	7.83	.. B C
Hoedown (MA86)	**7.67**	**.. B C D**
Cajun	7.53	.. .. C D
KY31-0E	7.43	.. .. C D
Fawn	7.30	.. .. C D
AU Triumph	7.07	.. .. .. D

THERE ARE 4 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	0.6498
STANDARD ERROR FOR COMPARISON	0.3298
REJECTION LEVEL (ALPHA)	0.050

Table 2:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE TLW2: TILLER LEAF WIDTH - 2003 DATA (MM)

LSD (T) COMPARISON OF MEANS OF TLW2 BY ID

ID	MEAN TLW2	HOMOGENEOUS GROUPS
Martin	8.70	A
Stargrazer	8.47	A B
Stag (EA28)	8.37	A B C
KY31-0E	8.33	A B C
Hoedown (MA86)	**8.20**	**A B C**
Cajun	7.87	.. B C D
Fawn	7.77	... . C D
AU Triumph	7.30	... . .. D

THERE ARE 4 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	0.6741
STANDARD ERROR FOR COMPARISON	0.3421
REJECTION LEVEL (ALPHA)	0.050

STATISTIX FOR WINDOWS

Table 1:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE TLL: TILLER LEAF LENGTH - 2002 DATA (MM)

LSD (T) COMPARISON OF MEANS OF TLL BY ID

ID	MEAN TLL	HOMOGENEOUS GROUPS
Cajun	275.2	A
Fawn	271.5	A
Martin	268.3	A
Stag (EA28)	263.4	A
AU Triumph	256.4	A B
Hoedown (MA86)	**234.8**	**.. B C**
KY31-0E	233.6	.. B C
Stargrazer	224.7	 C

THERE ARE 3 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	26.275
STANDARD ERROR FOR COMPARISON	13.336
REJECTION LEVEL (ALPHA)	0.050

Table 2:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE TLL2: TILLER LEAF LENGTH - 2003 DATA (MM)

LSD (T) COMPARISON OF MEANS OF TLL2 BY ID

ID	MEAN TLL2	HOMOGENEOUS GROUPS
Cajun	312.4	A
Stag (EA28)	310.3	A B
Fawn	304.0	A B
Martin	298.5	A B
AU Triumph	286.8	.. B C
Hoedown (MA86)	**270.3**	**... . C D**
KY31-0E	257.3	... .. . D E
Stargrazer	239.1	... . E

THERE ARE 5 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	24.880
STANDARD ERROR FOR COMPARISON	12.628
REJECTION LEVEL (ALPHA)	0.050

STATISTIX FOR WINDOWS

Table 1:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE INT: INTERNODE LENGTH - 2002 DATA (MM)

LSD (T) COMPARISON OF MEANS OF INT BY ID

ID	MEAN INT	HOMOGENEOUS GROUPS
Stargrazer	305.9	A
Cajun	303.2	A
KY31-0E	300.6	A
Martin	294.1	A B
Hoedown (MA86)	**292.7**	**A B**
AU Triumph	287.1	A B
Fawn	286.5	A B
Stag (EA28)	272.5	.. B

THERE ARE 2 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	22.820
STANDARD ERROR FOR COMPARISON	11.582
REJECTION LEVEL (ALPHA)	0.050

Table 2:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE INT2: INTERNODE LENGTH - 2003 DATA (MM)

LSD (T) COMPARISON OF MEANS OF INT2 BY ID

ID	MEAN INT2	HOMOGENEOUS GROUPS
KY31-0E	326.1	A
Martin	323.4	A B
Fawn	316.0	A B
Stargrazer	315.6	A B
Cajun	311.8	A B
Hoedown (MA86)	**309.4**	**A B**
Stag (EA28)	305.5	A B
AU Triumph	303.3	.. B

THERE ARE 2 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	22.255
STANDARD ERROR FOR COMPARISON	11.295
REJECTION LEVEL (ALPHA)	0.050

STATISTIX FOR WINDOWS

Table 1:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE PL: PANICLE LENGTH - 2002 DATA (MM)

LSD (T) COMPARISON OF MEANS OF PL BY ID

ID	MEAN PL	HOMOGENEOUS GROUPS
Stag (EA28)	306.4	A
Martin	303.9	A
Stargrazer	301.5	A B
KY31-0E	296.7	A B
Hoedown (MA86)	**283.5**	**A B C**
Cajun	278.8	.. B C
Fawn	278.6	.. B C
AU Triumph	258.7	 C

THERE ARE 3 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	24.883
STANDARD ERROR FOR COMPARISON	12.629
REJECTION LEVEL (ALPHA)	0.050

Table 2:

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE PL2: PANICLE LENGTH - 2003 DATA (MM)

LSD (T) COMPARISON OF MEANS OF PL2 BY ID

ID	MEAN PL2	HOMOGENEOUS GROUPS
Martin	315.5	A
Stag (EA28)	307.9	A
Stargrazer	306.6	A
KY31-0E	304.9	A
Hoedown (MA86)	**283.2**	**.. B**
Cajun	278.4	.. B C
Fawn	275.8	.. B C
AU Triumph	260.1	 C

THERE ARE 3 GROUPS IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	20.836
STANDARD ERROR FOR COMPARISON	10.575
REJECTION LEVEL (ALPHA)	0.050

STATISTIX FOR WINDOWS

2000 FORAGE TALL FESCUE PVP TRIAL
VARIABLE RL: RHIZOME LENGTH (MM)

LSD (T) COMPARISON OF MEANS OF RL BY ID

ID	MEAN RL	HOMOGENEOUS GROUPS
Stag (EA28)	32.93	A
Hoedown (MA86)	31.90	A
Martin	31.67	A
Stargrazer	31.27	A
KY31-0E	29.07	A
Fawn	27.73	A
Cajun	26.00	A
AU Triumph	25.20	A

THERE IS 1 GROUP IN WHICH THE MEANS ARE
NOT SIGNIFICANTLY DIFFERENT FROM ONE ANOTHER.

CRITICAL T VALUE	1.970
CRITICAL VALUE FOR COMPARISON (LSD)	8.5048
STANDARD ERROR FOR COMPARISON	4.3166
REJECTION LEVEL (ALPHA)	0.050

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Cascade International Seed Company	CAS-MA86, MA86	Hoedown

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)	5. TELEPHONE (include area code)	6. FAX (include area code)
8483 W. Stayton Rd. Aumsville, OR 97325	(503)749-1822	(503)749-1824

7. PVPO NUMBER 200400126

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain. [X] YES [ ] NO

9. Is the applicant *(individual or company)* a U.S. national or U.S. based company? [X] YES [ ] NO
If no, give name of country _____

10. Is the applicant the original owner? [X] YES [ ] NO *If no, please answer the following:*

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

[ ] YES [ ] NO *If no, give name of country* _____

b. If original rights to variety were owned by a company, is the original owner(s) a U.S. based company?

[ ] YES [ ] NO *If no, give name of country* _____

11. Additional explanation on ownership *(If needed, use reverse for extra space):*

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

#200400126

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	TEMPORARY OR EXPERIMENTAL DESIGNATION
CASCADE INTERNATIONAL SEED COMPANY	8483 W. STAYTON RD. AUMSVILLE,	CAS-MA86, MA86
		VARIETY NAME: HOEDOWN
NAME OF OWNER REPRESENTATIVE (S)	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country)	FOR OFFICIAL USE ONLY
CHAD F. MIEBACH	Radix Research, Inc. 533 Park Ave. Eugene, OR 97404 (ST:10/23/2007)	PVPO NUMBER: 200400126

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

CM F. M

Signature

10-16-07

Date